

## TENT COOPERATION TREATY

09/04/2000  
5000 PCT

**NOTIFICATION OF THE RECORDING  
OF A CHANGE**

(PCT Rule 92bis.1 and  
Administrative Instructions, Section 422)

From the INTERNATIONAL BUREAU

To:

CIBA SPECIALTY CHEMICALS HOLDING  
INC.  
Klybeckstrasse 141  
CH-4057 Basel  
SUISSE

<b>Date of mailing (day/month/year)</b> 14 January 2002 (14.01.02)	<b>IMPORTANT NOTIFICATION</b>
<b>Applicant's or agent's file reference</b> 1-22531/P1	
<b>International application No.</b> PCT/EP99/01429	<b>International filing date (day/month/year)</b> 05 March 1999 (05.03.99)

1. The following indications appeared on record concerning:

☒ the applicant ☐ the inventor ☐ the agent ☐ the common representative

<b>Name and Address</b> UNIVERSITÄT BAYREUTH Universitätsstrasse 30 D-95440 Bayreuth Germany	<b>State of Nationality</b> DE	<b>State of Residence</b> DE
	<b>Telephone No.</b>	
	<b>Facsimile No.</b>	
	<b>Teleprinter No.</b>	

2. The International Bureau hereby notifies the applicant that the following change has been recorded concerning:

☒ the person ☐ the name ☐ the address ☐ the nationality ☐ the residence

<b>Name and Address</b> CIBA SPECIALTY CHEMICALS HOLDING INC. Klybeckstrasse 141 CH-4057 Basel Switzerland	<b>State of Nationality</b> CH	<b>State of Residence</b> CH
	<b>Telephone No.</b>	
	<b>Facsimile No.</b>	
	<b>Teleprinter No.</b>	

3. Further observations, if necessary:

**Please note also that CIBA SPECIALTY CHEMICALS HOLDING INC. shall be recorded as common representative.**

4. A copy of this notification has been sent to:

☒ the receiving Office ☐ the designated Offices concerned  
☐ the International Searching Authority ☒ the elected Offices concerned  
☐ the International Preliminary Examining Authority ☐ other:

<b>The International Bureau of WIPO</b> 34, chemin des Colombettes 1211 Geneva 20, Switzerland	<b>Authorized officer</b>  Beate GIFFO-SCHMITT
Facsimile No.: (41-22) 740.14.35	Telephone No.: (41-22) 338.83.38

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# PATENT COOPERATION TREATY

09/9/4 700  
SPEC

PCT

## NOTIFICATION OF THE RECORDING OF A CHANGE

(PCT Rule 92bis.1 and  
Administrative Instructions, Section 422)

From the INTERNATIONAL BUREAU

To:

CIBA SPECIALTY CHEMICALS HOLDING  
INC.  
Klybeckstrasse 141  
CH-4057 Basel  
SUISSE

<b>Date of mailing</b> (day/month/year) 19 October 2001 (19.10.01)	<b>IMPORTANT NOTIFICATION</b>
<b>Applicant's or agent's file reference</b> 1-22531/P1	
<b>International application No.</b> PCT/EP99/01429	<b>International filing date</b> (day/month/year) 05 March 1999 (05.03.99)

<b>1. The following indications appeared on record concerning:</b> <input type="checkbox"/> the applicant <input type="checkbox"/> the inventor <input checked="" type="checkbox"/> the agent <input type="checkbox"/> the common representative		
<b>Name and Address</b> RICKER, Mathias Bardehle, Pagenberg, Dost, Altenburg, Geissler, Isenbruck Galileiplatz 1 D-81679 München Germany	<b>State of Nationality</b>	<b>State of Residence</b>
	<b>Telephone No.</b> 089 928 050	
	<b>Facsimile No.</b> 089 928 05 444	
	<b>Teleprinter No.</b>	
<b>2. The International Bureau hereby notifies the applicant that the following change has been recorded concerning:</b> <input type="checkbox"/> the person <input checked="" type="checkbox"/> the name <input checked="" type="checkbox"/> the address <input type="checkbox"/> the nationality <input type="checkbox"/> the residence		
<b>Name and Address</b> CIBA SPECIALTY CHEMICALS HOLDING INC. Klybeckstrasse 141 CH-4057 Basel Switzerland	<b>State of Nationality</b>	<b>State of Residence</b>
	<b>Telephone No.</b> +41 61 636 23 67	
	<b>Facsimile No.</b> +41 61 636 79 76	
	<b>Teleprinter No.</b>	
<b>3. Further observations, if necessary:</b>  		
<b>4. A copy of this notification has been sent to:</b> <input checked="" type="checkbox"/> the receiving Office <input type="checkbox"/> the designated Offices concerned <input type="checkbox"/> the International Searching Authority <input checked="" type="checkbox"/> the elected Offices concerned <input type="checkbox"/> the International Preliminary Examining Authority <input type="checkbox"/> other:		

<b>The International Bureau of WIPO</b> 34, chemin des Colombettes 1211 Geneva 20, Switzerland Facsimile No.: (41-22) 740.14.35	<b>Authorized officer</b>  Jaime LEITAO Telephone No.: (41-22) 338.83.38
--	---

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## PCT COOPERATION TREATY

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## NOTIFICATION OF ELECTION

(PCT Rule 61.2)

From the INTERNATIONAL BUREAU

To:

Commissioner  
 US Department of Commerce  
 United States Patent and Trademark  
 Office, PCT  
 2011 South Clark Place Room  
 CP2/5C24  
 Arlington, VA 22202  
 ETATS-UNIS D'AMERIQUE  
 in its capacity as elected Office

<b>Date of mailing</b> (day/month/year) 01 November 2000 (01.11.00)	
<b>International application No.</b> PCT/EP99/01429	<b>Applicant's or agent's file reference</b> U 26398 PC
<b>International filing date</b> (day/month/year) 05 March 1999 (05.03.99)	<b>Priority date</b> (day/month/year)
<b>Applicant</b> SCHMIDT, Hans-Werner et al	

1. The designated Office is hereby notified of its election made:

☒ in the demand filed with the International Preliminary Examining Authority on:

05 October 2000 (05.10.00)

☐ in a notice effecting later election filed with the International Bureau on:
2. The election ☒ was
☐ was not

made before the expiration of 19 months from the priority date or, where Rule 32 applies, within the time limit under Rule 32.2(b).

<b>The International Bureau of WIPO</b> 34, chemin des Colombettes 1211 Geneva 20, Switzerland Facsimile No.: (41-22) 740.14.35	Authorized officer Claudio Borton Telephone No.: (41-22) 338.83.38
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## PCT COOPERATION TREATY

PCT

## NOTIFICATION RELATING TO PRIORITY CLAIM

(PCT Rules 26bis.1 and 26bis.2 and  
Administrative Instructions, Sections 402 and 409)

From the INTERNATIONAL BUREAU

To:

RICKER, Mathias  
Bardehle, Pagenberg, Dost,  
Altenburg, Geissler, Isenbruck  
Galileiplatz 1  
D-81679 München  
ALLEMAGNE

Date of mailing (day/month/year) 03 September 1999 (03.09.99)	
Applicant's or agent's file reference U 26398 PC	<b>IMPORTANT NOTIFICATION</b>
International application No. PCT/EP99/01429	International filing date (day/month/year) 05 March 1999 (05.03.99)
Applicant UNIVERSITÄT BAYREUTH et al	

The applicant is hereby **notified** of the following in respect of the priority claim(s) made in the international application.

1. ☐ **Correction of priority claim.** In accordance with the applicant's notice received on: ,  
the following priority claim has been corrected to read as follows:
  - ☐ even though the indication of the number of the earlier application is missing.
  - ☐ even though the following indication in the priority claim is not the same as the corresponding indication appearing in the priority document:
2. ☐ **Addition of priority claim.** In accordance with the applicant's notice received on: ,  
the following priority claim has been added:
  - ☐ even though the indication of the number of the earlier application is missing.
  - ☐ even though the following indication in the priority claim is not the same as the corresponding indication appearing in the priority document:
3. ☐ As a **result of the correction and/or addition** of (a) priority claim(s) under items 1 and/or 2, the (earliest) priority date is:
4. ☒ **Priority claim considered not to have been made.**
  - ☒ The applicant failed to respond to the Invitation under Rule 26bis.2(a) (Form PCT/IB/316) within the prescribed time limit.
  - ☐ The applicant's notice was received after the expiration of the prescribed time limit under Rule 26bis.1(a).
  - ☐ The applicant's notice failed to correct the priority claim so as to comply with the requirements of Rule 4.10.

The applicant may, before the technical preparations for international publication have been completed and subject to the payment of a fee, request the International Bureau to publish, together with the international application, information concerning the priority claim. See Rule 26bis.2(c) and the PCT Applicant's Guide, Volume I, Annex B2(1B).
5. ☒ In case where **multiple priorities** have been claimed, the above item(s) relate to the following priority claim(s):  
EP 04 March 1998 (04.03.98) 98103812.8
6. A copy of this notification has been sent to the receiving Office and
  - ☒ to the International Searching Authority (where the international search report has not yet been issued).
  - ☒ the designated Offices (which have already been notified of the receipt of the record copy).

The International Bureau of WIPO 34, chemin des Colombettes 1211 Geneva 20, Switzerland	Authorized officer  P. Regis
Facsimile No. (41-22) 740.14.35	Telephone No. (41-22) 338.83.38

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## PATENT COOPERATION TREATY

From the INTERNATIONAL BUREAU

PCT

NOTICE INFORMING THE APPLICANT OF THE  
COMMUNICATION OF THE INTERNATIONAL  
APPLICATION TO THE DESIGNATED OFFICES

(PCT Rule 47.1(c), first sentence)

To:

RICKER, Mathias  
Bardehle, Pagenberg, Dost,  
Altenburg, Geissler, Isenbruck  
Galileiplatz 1  
D-81679 München  
ALLEMAGNE

PCT 19

Frist  
Bear.15. Sep. 2000  
05.10.00 ok

Date of mailing (day/month/year) 08 September 2000 (08.09.00)		IMPORTANT NOTICE	
Applicant's or agent's file reference U 26398 PC			
International application No. PCT/EP99/01429	International filing date (day/month/year) 05 March 1999 (05.03.99)	Priority date (day/month/year)	
Applicant UNIVERSITÄT BAYREUTH et al			

1. Notice is hereby given that the International Bureau has communicated, as provided in Article 20, the international application to the following designated Offices on the date indicated above as the date of mailing of this Notice:

AU, KP, KR, US

In accordance with Rule 47.1(c), third sentence, those Offices will accept the present Notice as conclusive evidence that the communication of the international application has duly taken place on the date of mailing indicated above and no copy of the international application is required to be furnished by the applicant to the designated Office(s).

2. The following designated Offices have waived the requirement for such a communication at this time:

AL, AM, AP, AT, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EA, EE, EP, ES, FI, GB, GE, GH, GM, HR,  
HU, ID, IL, IN, IS, JP, KE, KG, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, OA, PL, PT,  
RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG, UZ, VN, YU, ZW

The communication will be made to those Offices only upon their request. Furthermore, those Offices do not require the applicant to furnish a copy of the international application (Rule 49.1(a-bis)).

3. Enclosed with this Notice is a copy of the international application as published by the International Bureau on  
08 September 2000 (08.09.00) under No. WO 00/52089

**REMINDER REGARDING CHAPTER II (Article 31(2)(a) and Rule 54.2)**

If the applicant wishes to postpone entry into the national phase until 30 months (or later in some Offices) from the priority date, a demand for international preliminary examination must be filed with the competent International Preliminary Examining Authority before the expiration of 19 months from the priority date.

It is the applicant's sole responsibility to monitor the 19-month time limit.

Note that only an applicant who is a national or resident of a PCT Contracting State which is bound by Chapter II has the right to file a demand for international preliminary examination.

**REMINDER REGARDING ENTRY INTO THE NATIONAL PHASE (Article 22 or 39(1))**

If the applicant wishes to proceed with the international application in the national phase, he must, within 20 months or 30 months, or later in some Offices, perform the acts referred to therein before each designated or elected Office.

For further important information on the time limits and acts to be performed for entering the national phase, see the Annex to Form PCT/IB/301 (Notification of Receipt of Record Copy) and Volume II of the PCT Applicant's Guide.

The International Bureau of WIPO 34, chemin des Châmbettes 1211 Geneva 20, Switzerland  Facsimile No. (41-22) 740.14.35	Authorized officer  J. Zahra  Telephone No. (41-22) 338.83.38
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## A. CLASSIFICATION OF SUBJECT MATTER

IPC 6 C08K5/00 C08K5/12 C08K5/20 C07C69/017

According to International Patent Classification (IPC) or to both national classification and IPC

## B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

IPC 6 C08K C07C

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)

## C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	EP 0 780 428 A (MITSUI TOATSU CHEMICALS) 25 June 1997 (1997-06-25)	1-3,5,8, 9,11
Y	page 9, line 35; claim 1	1-4,8,9, 11
Y	--- JP 60 252655 A (MITSUBISHI YUKA KK) 13 December 1985 (1985-12-13) the whole document --- -/--	1-4,8,9, 11

☒ Further documents are listed in the continuation of box C.☒ Patent family members are listed in annex.

## \* Special categories of cited documents :

\*A\* document defining the general state of the art which is not considered to be of particular relevance

\*E\* earlier document but published on or after the international filing date

\*L\* document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)

\*O\* document referring to an oral disclosure, use, exhibition or other means

\*P\* document published prior to the international filing date but later than the priority date claimed

\*T\* later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention

\*X\* document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone

\*Y\* document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art.

\*Z\* document member of the same patent family

Date of the actual completion of the international search

7 October 1999

Date of mailing of the international search report

12.2.10.99

Name and mailing address of the ISA

European Patent Office, P.B. 5818 Patentlaan 2  
NL - 2280 HV Rijswijk  
Tel. (+31-70) 340-2040, Tx. 31 651 epo nl,  
Fax: (+31-70) 340-3016

Authorized officer

Devriese, K

# INTERNATIONAL SEARCH REPORT

In: Application No

PCT/EP 99/01429

## C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
Y	CHEMICAL ABSTRACTS, vol. 125, no. 24, 9 December 1996 (1996-12-09) Columbus, Ohio, US; abstract no. 309830, XP002073173 abstract	1-4,8,9, 11
Y	& YASUDA, Y. ET AL.: "4,4',4''", ADV.MATER., vol. 8, no. 9, 1996, pages 740-741,	1-4,8,9, 11
X		10
Y	--- DATABASE BEILSTEIN [Online] Ref. 1646400, Comp. Reg. No. 1989871, XP002073174 & JOURNAL ISOSHIMA, NPKZAZ, NIPPON KAGAKU ZASSHI, 77, 1956, 422, 431 abstract	1-4,8,9, 11
Y	--- DATABASE BEILSTEIN [Online] Ref. 279234, comp. Reg. No. 2030045, XP002073175 & Alekseeva, L.A. et al., J. ORG. CHEM. USSR (ENGL. TRANSL.), 10, 1974, 1063-1068 abstract	1-4,8,9, 11
Y	--- DATABASE BEILSTEIN [Online] Ref. 1985261, Comp. Reg. No. 2489023, XP002073176 & Rosenmund, Lohfert, Chem. Ber. 61, 1928, 2607 abstract	1-4,8,9, 11
Y	--- DATABASE BEILSTEIN [Online] Ref. 2029913, Comp. Reg. No. 3455889, XP002073177 & David, Imer, Bull. Soc. Chim. Fr., 1953, 183 abstract	1-4,8,9, 11
Y	--- DATABASE BEILSTEIN [Online] Ref. 5818304, Comp. Reg. No. 6557393 and 6558299, XP002073178 & Takenada et al. Mol. Cryst. Liq. Cryst, 111, 1984, 227-236 abstract	1-4,8,9, 11
Y	--- DATABASE BEILSTEIN [Online] Ref. 5881807, Comp. Reg. No. 6885534 and 6886402, XP002073179 & AKOPOVA, ET AL. J. GEN. CHEM. USSR (ENGL) 57, 1987, 570-574 abstract	1-4,8,9, 11
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# INTERNATIO SEARCH REPORT

Int. Application No.

PCT/EP 99/01429

## C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
Y	DATABASE BEILSTEIN [Online] REF. 6046315, COMP. REG. NO. 7649924, XP002073180 &PARMAR ET AL. BIOORG.MED.CHEM.LETT,6,19,1996,2269-2274 abstract ---	1-4,8,9, 11
Y	US 4 294 747 A (SU TIEN-KUEI) 13 October 1981 (1981-10-13) cited in the application	1-4,8,9, 11
X	column 2, line 29-60; claim 1 ---	1,11
Y	US 5 278 216 A (ASANUMA TADASHI ET AL) 11 January 1994 (1994-01-11) cited in the application	1-4,8,9, 11
X	column 4, line 21-41; claim 1 ---	1,11
Y	US 3 367 926 A (VOEKS JOHN F) 6 February 1968 (1968-02-06) cited in the application claim 1; tables 2-8 ---	1-4,8,9, 11
X	EP 0 278 409 A (IDEMITSU PETROCHEMICAL CO) 17 August 1988 (1988-08-17) page 4, line 40-50; claim 1 ---	1-12
X	GB 2 310 860 A (EASTMAN KODAK CO) 10 September 1997 (1997-09-10) page 8, line 1 -page 9, line 40; claim 1 -----	1-7,9,12



# INTERNATIONAL SEARCH REPORT

International application No.  
PCT/EP 99/01429

## Box I Observations where certain claims were found unsearchable (Continuation of item 1 of first sheet)

This International Search Report has not been established in respect of certain claims under Article 17(2)(a) for the following reasons:

1. ☐ Claims Nos.:  
because they relate to subject matter not required to be searched by this Authority, namely:
2. ☐ Claims Nos.:  
because they relate to parts of the International Application that do not comply with the prescribed requirements to such an extent that no meaningful International Search can be carried out, specifically:
3. ☐ Claims Nos.:  
because they are dependent claims and are not drafted in accordance with the second and third sentences of Rule 6.4(a).

## Box II Observations where unity of invention is lacking (Continuation of item 2 of first sheet)

This International Searching Authority found multiple inventions in this international application, as follows:

see additional sheet

1. ☐ As all required additional search fees were timely paid by the applicant, this International Search Report covers all searchable claims.
2. ☐ As all searchable claims could be searched without effort justifying an additional fee, this Authority did not invite payment of any additional fee.
3. ☒ As only some of the required additional search fees were timely paid by the applicant, this International Search Report covers only those claims for which fees were paid, specifically claims Nos.:  
1-9,11 with A=C and B=ester-group;1-12 with A=N
4. ☐ No required additional search fees were timely paid by the applicant. Consequently, this International Search Report is restricted to the invention first mentioned in the claims; it is covered by claims Nos.:

Remark on Protest

- ☐ The additional search fees were accompanied by the applicant's protest.
- ☒ No protest accompanied the payment of additional search fees.

**FURTHER INFORMATION CONTINUED FROM PCT/ISA/ 210**

This International Searching Authority found multiple (groups of) inventions in this international application, as follows:

1. Claims: 1-9,11 (partially)

Searched:

I.1 Claims 1-9,11 with respect to compounds according to formula 1 with respect to A is carbon and B is an ester-group

2. Claims: 1-9,11

Not searched

I.2 Claims 1-9,11 with respect to compounds according to formula 1 with respect to A is carbon and B is a thioester-group

3. Claims: 1-9,11

Not searched

I.3 Claims 1-9,11 with respect to compounds according to formula 1 with respect to A is carbon and B is an ether-group

4. Claims: 1-9,11

Not searched

I.4 Claims 1-9,11 with respect to compounds according to formula 1 with respect to A is carbon and B is a thioether-group

5. Claims: 1-9,11

Not searched

I.5 Claims 1-9,11 with respect to compounds according to formula 1 with respect to A is carbon and B is a ketone-group

6. Claims: 1-9,11

Not searched

I.6 Claims 1-9,11 with respect to compounds according to formula 1 with respect to A is carbon and B is a prim. or sec. amine-group

7. Claims: 1-9,11

Not searched

**FURTHER INFORMATION CONTINUED FROM PCT/ISA/ 210**

1.7 Claims 1-9,11 with respect to compounds according to formula 1 with respect to A is carbon and B is an amide group

8. Claims: 1-9,11

Not searched

1.8 Claims 1-9,11 with respect to compounds according to formula 1 with respect to A is carbon and B is an imide group

9. Claims: 1-9,11

Not searched

1.9 Claims 1-9,11 with respect to compounds according to formula 1 with respect to A is carbon and B is an imine-group

10. Claims: 1-9,11

Not searched

1.10 Claims 1-9,11 with respect to compounds according to formula 1 with respect to A is carbon and B is an azo-group

11. Claims: 1-9,11

Not searched

1.11 Claims 1-9,11 with respect to compounds according to formula 1 with respect to A is carbon and B is a urea-group

12. Claims: 1-9,11

Not searched

1.12 Claims 1-9,11 with respect to compounds according to formula 1 with respect to A is carbon and B is a urethane group

13. Claims: 1-9,11

Not searched

1.13 Claims 1-9,11 with respect to compounds according to formula 1 with respect to A is carbon and B is a thiourethane group

14. Claims: 1-9,11

FURTHER INFORMATION CONTINUED FROM PCT/ISA/ 210

Not searched

I.14 Claims 1-9,11 with respect to compounds according to formula 1 with respect to A is carbon and B is a sulfonamide-group

15. Claims: 1-11, 12

Not searched

II Claims 1-9,11,12 with respect to compounds according to formula 1 with respect to A is nitrogen and claim 10.

16. Claims: 1-9,11,12

Not searched

III Claims 1-9,11,12 with respect to compounds according to formula 1 with respect to A is phosphorous

17. Claims: 1-9,11

Not searched

IV Claims 1-9,11 with respect to compounds according to formula 1 with respect to A is boron

18. Claims: 1-9,11

Not searched

V Claims 1-9,11 with respect to compounds according to formula 1 with respect to A is silicon

# INTERNATIONAL SEARCH REPORT

Information on patent family members

International Application No

PCT/EP 99/01429

Patent document cited in search report	Publication date	Patent family member(s)	Publication date
EP 0780428 A	25-06-1997	JP 9278991 A	28-10-1997
JP 60252655 A	13-12-1985	NONE	
US 4294747 A	13-10-1981	AT 380262 B	12-05-1986
		AT 474480 A	15-09-1985
		AU 533775 B	08-12-1983
		AU 6257280 A	09-04-1981
		CH 645910 A	31-10-1984
		DE 3035682 A	09-04-1981
		DK 401080 A	25-03-1981
		FR 2465762 A	27-03-1981
		GB 2061290 A,B	13-05-1981
		IE 50315 B	02-04-1986
		IT 1128566 B	28-05-1986
		LU 82796 A	04-06-1981
		NL 8005331 A,B,	26-03-1981
		NZ 195047 A	23-11-1982
		BE 885341 A	23-03-1981
		CA 1153845 A	13-09-1983
		JP 1395715 C	24-08-1987
		JP 56103242 A	18-08-1981
		JP 61056253 B	01-12-1986
US 5278216 A	11-01-1994	CA 2030532 A,C	19-10-1990
		DE 69024442 D	08-02-1996
		DE 69024442 T	01-08-1996
		EP 0419677 A	03-04-1991
		ES 2081368 T	01-03-1996
		WO 9012843 A	01-11-1990
		KR 9404846 B	02-06-1994
		AU 622538 B	09-04-1992
		AU 5358590 A	05-11-1990
		AU 5433090 A	16-11-1990
		CA 2030807 C	12-09-1995
		CA 2030807 A	12-10-1990
		DE 69017206 D	30-03-1995
		DE 69017206 T	12-10-1995
		EP 0466926 A	22-01-1992
		ES 2070319 T	01-06-1995
		WO 9012057 A	18-10-1990
		WO 9012839 A	01-11-1990
		KR 9310654 B	05-11-1993
		US 5232992 A	03-08-1993
		JP 3054238 A	08-03-1991
US 3367926 A	06-02-1968	NONE	
EP 0278409 A	17-08-1988	JP 8026192 B	13-03-1996
		JP 63193944 A	11-08-1988
		JP 1090238 A	06-04-1989
		JP 2118293 C	06-12-1996
		JP 8013911 B	14-02-1996
		CA 1318425 A	25-05-1993
		DE 3884002 D	21-10-1993
		DE 3884002 T	21-04-1994
		US 5030682 A	09-07-1991

# INTERNATIONAL SEARCH REPORT

### Information on patent family members

In.                      Application No                     

PCT/EP 99/01429

Patent document cited in search report	Publication date	Patent family member(s)	Publication date
GB 2310860 A	10-09-1997	US 5780545 A	14-07-1998
		DE 19709252 A	30-10-1997

# PCT

## INTERNATIONAL SEARCH REPORT

(PCT Article 18 and Rules 43 and 44)

Applicant's or agent's file reference <b>U 26398 PC</b>	<b>FOR FURTHER ACTION</b> see Notification of Transmittal of International Search Report (Form PCT/ISA/220) as well as, where applicable, item 5 below.	
International application No. <b>PCT/EP 99/ 01429</b>	International filing date (day/month/year) <b>05/03/1999</b>	(Earliest) Priority Date (day/month/year) <b>04/03/1998</b>
Applicant  <b>UNIVERSITÄT BAYREUTH et al.</b>		

This International Search Report has been prepared by this International Searching Authority and is transmitted to the applicant according to Article 18. A copy is being transmitted to the International Bureau.

This International Search Report consists of a total of 9 sheets.

☒ It is also accompanied by a copy of each prior art document cited in this report.

### 1. Basis of the report

- a. With regard to the **language**, the international search was carried out on the basis of the international application in the language in which it was filed, unless otherwise indicated under this item.

☐ the international search was carried out on the basis of a translation of the international application furnished to this Authority (Rule 23.1(b)).

- b. With regard to any **nucleotide and/or amino acid sequence** disclosed in the international application, the international search was carried out on the basis of the sequence listing :

☐ contained in the international application in written form.

☐ filed together with the international application in computer readable form.

☐ furnished subsequently to this Authority in written form.

☐ furnished subsequently to this Authority in computer readable form.

☐ the statement that the subsequently furnished written sequence listing does not go beyond the disclosure in the international application as filed has been furnished.

☐ the statement that the information recorded in computer readable form is identical to the written sequence listing has been furnished

2. ☐ **Certain claims were found unsearchable** (See Box I).

3. ☒ **Unity of invention is lacking** (see Box II).

4. With regard to the **title**,

☒ the text is approved as submitted by the applicant.

☐ the text has been established by this Authority to read as follows:

5. With regard to the **abstract**,

☐ the text is approved as submitted by the applicant.

☒ the text has been established, according to Rule 38.2(b), by this Authority as it appears in Box III. The applicant may, within one month from the date of mailing of this international search report, submit comments to this Authority.

6. The figure of the **drawings** to be published with the abstract is Figure No.

☐ as suggested by the applicant.

☐ because the applicant failed to suggest a figure.

☐ because this figure better characterizes the invention.

☒ None of the figures.

# INTERNATIONAL SEARCH REPORT

International application No.  
PCT/EP 99/01429

## B x I Observations where certain claims were found unsearchable (Continuation of item 1 of first sheet)

This International Search Report has not been established in respect of certain claims under Article 17(2)(a) for the following reasons:

1. ☐ Claims Nos.:  
because they relate to subject matter not required to be searched by this Authority, namely:
  
2. ☐ Claims Nos.:  
because they relate to parts of the International Application that do not comply with the prescribed requirements to such an extent that no meaningful International Search can be carried out, specifically:
  
3. ☐ Claims Nos.:  
because they are dependent claims and are not drafted in accordance with the second and third sentences of Rule 6.4(a).

## B x II Observations where unity of invention is lacking (Continuation of item 2 of first sheet)

This International Searching Authority found multiple inventions in this international application, as follows:

see additional sheet

1. ☐ As all required additional search fees were timely paid by the applicant, this International Search Report covers all searchable claims.
  
2. ☐ As all searchable claims could be searched without effort justifying an additional fee, this Authority did not invite payment of any additional fee.
  
3. ☒ As only some of the required additional search fees were timely paid by the applicant, this International Search Report covers only those claims for which fees were paid, specifically claims Nos.:  
  
1-9,11 with A=C and B=ester-group;1-12 with A=N
  
4. ☐ No required additional search fees were timely paid by the applicant. Consequently, this International Search Report is restricted to the invention first mentioned in the claims; it is covered by claims Nos.:

### Remark on Protest

- ☐ The additional search fees were accompanied by the applicant's protest.
- ☒ No protest accompanied the payment of additional search fees.



## FURTHER INFORMATION CONTINUED FROM PCT/ISA/ 210

This International Searching Authority found multiple (groups of) inventions in this international application, as follows:

1. Claims: 1-9,11 (partially)

Searched:

I.1 Claims 1-9,11 with respect to compounds according to formula 1 with respect to A is carbon and B is an ester-group

2. Claims: 1-9,11

Not searched

I.2 Claims 1-9,11 with respect to compounds according to formula 1 with respect to A is carbon and B is a thioester-group

3. Claims: 1-9,11

Not searched

I.3 Claims 1-9,11 with respect to compounds according to formula 1 with respect to A is carbon and B is an ether-group

4. Claims: 1-9,11

Not searched

I.4 Claims 1-9,11 with respect to compounds according to formula 1 with respect to A is carbon and B is a thioether-group

5. Claims: 1-9,11

Not searched

I.5 Claims 1-9,11 with respect to compounds according to formula 1 with respect to A is carbon and B is a ketone-group

6. Claims: 1-9,11

Not searched

I.6 Claims 1-9,11 with respect to compounds according to formula 1 with respect to A is carbon and B is a prim. or sec. amine-group

7. Claims: 1-9,11

Not searched

FURTHER INFORMATION CONTINUED FROM PCT/ISA/ 210

I.7 Claims 1-9,11 with respect to compounds according to formula 1 with respect to A is carbon and B is an amide group

8. Claims: 1-9,11

Not searched

I.8 Claims 1-9,11 with respect to compounds according to formula 1 with respect to A is carbon and B is an imide group

9. Claims: 1-9,11

Not searched

I.9 Claims 1-9,11 with respect to compounds according to formula 1 with respect to A is carbon and B is an imine-group

10. Claims: 1-9,11

Not searched

I.10 Claims 1-9,11 with respect to compounds according to formula 1 with respect to A is carbon and B is an azo-group

11. Claims: 1-9,11

Not searched

I.11 Claims 1-9,11 with respect to compounds according to formula 1 with respect to A is carbon and B is an urea-group

12. Claims: 1-9,11

Not searched

I.12 Claims 1-9,11 with respect to compounds according to formula 1 with respect to A is carbon and B is a urethane group

13. Claims: 1-9,11

Not searched

I.13 Claims 1-9,11 with respect to compounds according to formula 1 with respect to A is carbon and B is a thiourethane group

14. Claims: 1-9,11

FURTHER INFORMATION CONTINUED FROM PCT/ISA/ 210

Not searched

I.14 Claims 1-9,11 with respect to compounds according to formula 1 with respect to A is carbon and B is a sulfonamide-group

15. Claims: 1-11, 12

Not searched

II Claims 1-9,11,12 with respect to compounds according to formula 1 with respect to A is nitrogen and claim 10.

16. Claims: 1-9,11,12

Not searched

III Claims 1-9,11,12 with respect to compounds according to formula 1 with respect to A is phosphorous

17. Claims: 1-9,11

Not searched

IV Claims 1-9,11 with respect to compounds according to formula 1 with respect to A is boron

18. Claims: 1-9,11

Not searched

V Claims 1-9,11 with respect to compounds according to formula 1 with respect to A is silicon

# INTERNATIONAL SEARCH REPORT

International application No.  
PCT/EP 99/ 01429

## Box III TEXT OF THE ABSTRACT (Continuation of item 5 of the first sheet)

Disclosed are compositions comprising nucleators for crystallizable thermosplastic polymers and, in particular, chemical compounds used as nucleators that comprise moieties that are capable of forming intermolecular hydrogen bonds and that are thermally stable, and the use thereof.

## INTERNATIONAL SEARCH REPORT

International Application No

PCT/JP 99/01429

## A. CLASSIFICATION OF SUBJECT MATTER

IPC 6 C08K5/00 C08K5/12 C08K5/20 C07C69/017

According to International Patent Classification (IPC) or to both national classification and IPC

## B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

IPC 6 C08K C07C

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)

## C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category °	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	EP 0 780 428 A (MITSUI TOATSU CHEMICALS) 25 June 1997 (1997-06-25)	1-3,5,8, 9,11
Y	page 9, line 35; claim 1	1-4,8,9, 11
Y	JP 60 252655 A (MITSUBISHI YUKA KK) 13 December 1985 (1985-12-13) the whole document	1-4,8,9, 11



Further documents are listed in the continuation of box C.



Patent family members are listed in annex.

## ° Special categories of cited documents :

- \*A\* document defining the general state of the art which is not considered to be of particular relevance
- \*E\* earlier document but published on or after the international filing date
- \*L\* document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)
- \*O\* document referring to an oral disclosure, use, exhibition or other means
- \*P\* document published prior to the international filing date but later than the priority date claimed

\*T\* later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention

\*X\* document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone

\*Y\* document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art.

\* & \* document member of the same patent family

Date of the actual completion of the international search

7 October 1999

Date of mailing of the international search report

22.10.99

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Authorized officer

Devriese, K

## INTERNATIONAL SEARCH REPORT

International Application No

PC 99/01429

## C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

Category °	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
Y	CHEMICAL ABSTRACTS, vol. 125, no. 24, 9 December 1996 (1996-12-09) Columbus, Ohio, US; abstract no. 309830, XP002073173 abstract	1-4,8,9, 11
Y	& YASUDA, Y. ET AL.: "4,4',4'', " ADV.MATER., vol. 8, no. 9, 1996, pages 740-741,	1-4,8,9, 11
X		10
Y	--- DATABASE BEILSTEIN [Online] Ref. 1646400, Comp. Reg. No. 1989871, XP002073174 & JOURNAL ISOSHIMA, NPKZAZ, NIPPON KAGAKU ZASSHI, 77, 1956, 422, 431 abstract	1-4,8,9, 11
Y	--- DATABASE BEILSTEIN [Online] Ref. 279234, comp. Reg. No. 2030045, XP002073175 & Alekseeva, L.A. et al., J. ORG. CHEM. USSR (ENGL. TRANSL.), 10, 1974, 1063-1068 abstract	1-4,8,9, 11
Y	--- DATABASE BEILSTEIN [Online] Ref. 1985261, Comp. Reg. No. 2489023, XP002073176 & Rosenmund, Lohfert, Chem. Ber. 61, 1928, 2607 abstract	1-4,8,9, 11
Y	--- DATABASE BEILSTEIN [Online] Ref. 2029913, Comp., Reg. No. 3455889, XP002073177 & David, Imer, Bull. Soc. Chim. Fr., 1953, 183 abstract	1-4,8,9, 11
Y	--- DATABASE BEILSTEIN [Online] Ref. 5818304, Comp. Reg. No. 6557393 and 6558299, XP002073178 & Takenada et al. Mol. Cryst. Liq. Cryst, 111, 1984, 227-236 abstract	1-4,8,9, 11
Y	--- DATABASE BEILSTEIN [Online] Ref. 5881807, Comp. Reg. No. 6885534 and 6886402, XP002073179 & AKOPOVA, ET AL. J. GEN. CHEM. USSR (ENGL) 57, 1987, 570-574 abstract	1-4,8,9, 11
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## INTERNATIONAL SEARCH REPORT

International Application No.

P 99/01429

## C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

Category °	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
Y	<p>DATABASE BEILSTEIN [Online]  REF. 6046315, COMP. REG. NO. 7649924,  XP002073180  &amp;pARMAR ET AL.  BIOORG.MED.CHEM.LETT,6,19,1996,2269-2274  abstract</p> <p>---</p>	1-4,8,9, 11
Y	<p>US 4 294 747 A (SU TIEN-KUEI)  13 October 1981 (1981-10-13)  cited in the application</p>	1-4,8,9, 11
X	<p>column 2, line 29-60; claim 1</p> <p>---</p>	1,11
Y	<p>US 5 278 216 A (ASANUMA TADASHI ET AL)  11 January 1994 (1994-01-11)  cited in the application</p>	1-4,8,9, 11
X	<p>column 4, line 21-41; claim 1</p> <p>---</p>	1,11
Y	<p>US 3 367 926 A (VOEKS JOHN F)  6 February 1968 (1968-02-06)  cited in the application</p>	1-4,8,9, 11
X	<p>claim 1; tables 2-8</p> <p>---</p>	
X	<p>EP 0 278 409 A (IDEMITSU PETROCHEMICAL CO)  17 August 1988 (1988-08-17)  page 4, line 40-50; claim 1</p> <p>---</p>	1-12
X	<p>GB 2 310 860 A (EASTMAN KODAK CO)  10 September 1997 (1997-09-10)  page 8, line 1 -page 9, line 40; claim 1</p> <p>-----</p>	1-7,9,12

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Inform 1 patent family members

International Application No

PO 99/01429

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